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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,949	12/10/2003	Horst Schonebeck	60,130-1980;00mra0443	6778
26096	7590	01/27/2006		
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009				
			EXAMINER BLANKENSHIP, GREGORY A	
			ART UNIT 3612	PAPER NUMBER

DATE MAILED: 01/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/731,949	SCHONEBECK, HORST	
	Examiner	Art Unit	
	Greg Blankenship	3612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 14-20 is/are rejected.
- 7) ☒ Claim(s) 21-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 7-12, 15-17, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Bartoli et al. (FR2729621).

Bartoli et al. disclose a deformation element that is made of a first base part (5) and a second base part defined by the foam that surrounds plate (4). The first base part (5) has several tapered protrusions extending from the base part. The second base part has several tapered recesses that correspond to the tapered protrusions of the first base part (5). The first base part (5) is made of polypropylene and is harder than the foam used to form the second base part. This is best seen in Figure 3', which shows the deformation of a protrusion and recess when subjected to a load. The tapered protrusions penetrate the tapered recesses when subjected to a load resulting in the deformation of the protrusions. In reference to claims 2 and 4, the protrusions and recesses have the shape of truncated cones. In reference to claim 7, the angle between a side surface of the protrusions and a middle axis of the protrusions is larger than an angle between a side surface of the recesses and a middle axis of the recesses. In reference to claim 8, the angle between a side surface of the protrusions and a middle axis of the protrusion varies during deformation resulting in an irregular shape. In reference to claim 9, the angle between a side surface of the recesses and a middle axis of the recesses varies during deformation resulting in an

Art Unit: 3612

irregular shape. In reference to claim 10, the cross section of the front face of the protrusion is smaller than the front surface area of the recess. In reference to claim 11, the cross section of the foot of the protrusion is larger than the cross section of the front surface area of the recess. In reference to claims 12 and 17, first base part (5) is configured like a plate with a plurality of protrusions while the second base part is configured like a plate with a plurality of recesses. In reference to claim 15 and 16, the base parts are capable of being attached to either a car outer body part or a lining piece of a vehicle interior. In reference to claim 19, the protrusions of the first base plate are considered solid since they are made of a solid material that does not contain any holes, openings, etc. In reference to claim 20, the first base part (5) is a solid plate and the second base part is a solid plate body that has recesses that extend into the solid plate body.

3. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Salloum et al. (3,933,387).

Salloum et al. disclose an energy absorber composed of two plates (38,40). Each plate (38,40) has pyramid shaped protrusions and pyramid shaped recesses that are formed by the edges of the pyramid shaped protrusions. The protrusions of each plate (38,40) are received by corresponding recesses in the other plate (38,40). The angle of a side surface of each protrusion and a middle axis is the same as the angle of a side surface of each recess and a middle axis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3612

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartoli et al. (FR2729621) in view of Salloum et al. (3,933,387).

Bartoli et al. do not disclose the claimed truncated pyramid shape.

Salloum et al. teaches the use of truncated pyramid shaped protrusions and recesses in a deformation element.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the protrusions and recesses of Bartoli et al. as truncated pyramids, as taught by Salloum et al., to provide the desired energy absorption characteristics.

6. Claims 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartoli et al. (FR2729621) in view of Redmond (6,062,413).

Bartoli et al. does not disclose the claimed material for the first base plate.

Redmond teaches the use of foamed HIPS plastic in place of polypropylene (column 6, line 66-column 7, line 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first base plate of Bartoli et al. using foamed HIPS in place of polypropylene, as taught by Redmond, to tune the absorption characteristics of the energy absorber.

Allowable Subject Matter

7. Claims 21-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed 11/8/2005 have been fully considered but they are not persuasive. The applicant has argued that Bartolini does not disclose the foam to be a deformation element. However, in order for element (4) to deform, the foam that surrounds it must deform. Therefore, the foam does deform when the protrusions of element (5) are inserted into the recesses formed in the foam. The applicant has argued that the foam surround element (4) is not a plate. The examiner disagrees since the foam that surrounds the element (4) is substantially thin in thickness when compared to its other dimensions, thus making it as much like a plate as the applicant's invention shown in applicant's Figure 1. The applicant has argued that Bartolini's invention is not disclosed to be attached to an exterior of a vehicle or a lining piece of a vehicle interior. The claim does not require this. The claim only requires the structure to be capable of that which it is. Broadly speaking, the invention of Bartolini could be tied or taped to either a vehicle exterior or a lining piece. The applicant has argued in reference to claim 17 that the examiner's interpretation of Bartolini does not anticipate claim 17. This is correct because "softer" should have been "harder". This is clearly a typing error because the foam must be softer than the first base part (5) in order for the first base part (5) to deform element (4) and the foam that surrounds element (4), as seen in Figure 3'. The applicant has argued that first base plate (5) does not move towards the other base plate, the foam surrounding element (4). This is incorrect because first base plate (5) is clearly shown moving towards element (4). The foam

Art Unit: 3612

surrounds element (4) so the first base plate must also be moving towards the foam when it is moving towards element (4).

The applicant has argued that Salloum et al. (3,933,387) only discloses sheets with a plurality of projections and not a sheet with recesses. This is partially incorrect. Both sheets have protrusions. If one considers the tip of the protrusions to be the base of the sheet, then the spaces between the protrusions that extend from the tip to the base of the protrusion form recesses. These recesses are bounded by the edges of the protrusions to form pyramid shaped recesses that are shaped to receive the protrusions of the opposing sheet. The angle between a side of the surface of surface of the tapered protrusion and a middle axis of the tapered protrusion is EQUAL to the angle between the side surface of the recess and a middle axis of the recess because the sheets are identical and the recess is defined by the edges of one sheet's protrusions.

The applicant has argued that Redmond is non-analogous art. Redman is only used to teach foamed HIPS has physical properties that are similar enough to polypropylene that it can be used as a substitute material for polypropylene. In this manner, Redman is applicable to the claims. The applicant has argued that there is no reason to combine Redman and Bartolini. The examiner disagrees since the combination is only directed at the claimed material. Both materials are known and one would have to consider the positives and negatives (cost, weight, formability, energy absorption) of both materials when making the structure of Bartolini to optimize the structure.

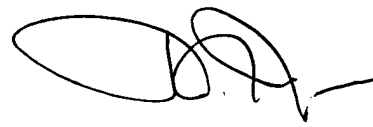
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Blankenship whose telephone number is 571-272-6656.

Art Unit: 3612

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Dayoan can be reached on 571-272-6659. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gab
January 23, 2006



D. GLENN DAYOAN 1/23/06
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600